

AMENDMENTS TO THE CLAIMS

1-80. (Canceled)

81. (Currently Amended) A cordless soldering tool comprising:

a handheld body adapted to house an electrical power storage source;

a detachable solder tip ~~mounted~~ detachably affixed to ~~[[on]]~~ the handheld body and electrically connectable to the electrical power storage source, the detachable solder tip having first and second electrodes disposed in a spaced apart manner, ~~such that a short is created across the first and second electrodes upon placement of~~ to be shorted upon placing an electrically conductive material external to the cordless soldering tool in electrical communication with across the first and second electrodes to enable electrical current to flow through the detachable solder tip;

a light located on the handheld body, wherein the light is oriented such that the light can illuminate a working surface proximate the detachable solder tip; and

an electrical switch located on the handheld body, ~~the electrical switch electrically connected~~ to selectively disconnect the detachable solder tip and the light from the electrical power source, such that when the switch is closed, the power source powers the light and additionally powers the detachable solder tip when a short is created across the first and second electrodes to allow electrical current to flow between the first and second electrodes.

~~between the detachable solder tip and the light and the electrical power storage source, the electrical switch capable of selectively powering the light without powering the solder tip.~~

82. (Currently Amended) The cordless soldering tool of claim 81, further comprising an electrical power storage source.

83-85. (Canceled)

86. (Previously Presented) The cordless soldering tool of claim 81, wherein the detachable solder tip has an electrical resistivity of 1,500 micro-Ohm-cm or greater and a density of about 1.5 to 1.75 g/cc.

87. (Previously Presented) The cordless soldering tool of claim 86, wherein the detachable solder tip has an electrical resistivity of over 3,000 micro-Ohm-cm.

88. (Previously Presented) The cordless soldering tool of claim 86, wherein the detachable solder tip has a thermal conductivity of less than or equal to 10 BTU/hr-ft-°F.

89. (Previously Presented) The cordless soldering tool of claim 86, wherein the detachable solder tip includes a flexural strength of at least about 1,500 psi.

90. (Previously Presented) The cordless soldering tool of claim 89, wherein the detachable solder tip has a thermal conductivity of less than or equal to 10 BTU/hr-ft-°F.

91. (Previously Presented) The cordless soldering tool of claim 81, wherein the detachable solder tip comprises graphite.

92. (Currently Amended) A cordless soldering tool comprising:

a handheld body comprising a compartment for inserting a removable electrical power storage source within the handheld body;

a detachable solder tip ~~mounted on~~ detachably affixed to the handheld body and electrically connectable to the electrical power storage source, the detachable solder tip having first and second electrodes disposed in a spaced apart manner at ~~[[the]]~~ a terminal end of the detachable solder tip, ~~such that a short is created across the first and second electrodes upon placement of~~ an electrically conductive material external to the cordless soldering tool ~~in electrical communication with~~ across the first and second electrodes to enable electrical current to flow through the detachable solder tip;

a light located on the handheld body, wherein the light is oriented such that the light can illuminate a working surface proximate the detachable solder tip; and

a user-operable switch mounted on the handheld body, to selectively disconnect the detachable solder tip and the light from the electrical power source, such that when the switch is closed, the power source powers the light and additionally powers the detachable solder tip when a short is created across the first and second electrodes to allow electrical current to flow between the first and second electrodes.

~~and electrically connected between the detachable solder tip and the light and the electrical power storage source, the user operable switch capable of selectively powering the light without powering the detachable solder tip.~~

93. (Previously Presented) The soldering tool of Claim 81, wherein the detachable solder tip generates heat during the time that a short is created across the electrodes and cools when a short across the first and second electrodes is removed.

94. (Previously Presented) The soldering tool of Claim 93, wherein the detachable solder tip can heat to 600°F.

95. (Previously Presented) The soldering tool of Claim 81, wherein the electrically conductive material is solder.

96. (Previously Presented) The soldering tool of Claim 92, wherein the detachable solder tip generates heat during the time that a short is created across the electrodes.

97. (Previously Presented) The soldering tool of Claim 96, wherein the detachable solder tip cools when the short across the first and second electrodes is removed.

98. (Previously Presented) The soldering tool of Claim 97, wherein the detachable solder tip can heat to 600°F.

99. (Previously Presented) The soldering tool of Claim 92, wherein the electrically conductive material is solder.

100. (Previously Presented) The soldering tool of Claim 92, further comprising an insulator disposed between the first and second electrodes.

101. (Previously Presented) The soldering tool of Claim 92, wherein the light is a light emitting diode.

102. (New) The cordless soldering tool of claim 81, wherein, when the electrical switch is opened, electricity is not transmitted to the light.

103. (New) The cordless soldering tool according to claim 82, wherein the electrical power storage source is a battery.

104. (New) A cordless soldering tool comprising:
a handheld body adapted to house an electrical power source;
a detachable solder tip detachably affixed to the handheld body and electrically connectable to the electrical power storage source, the detachable solder tip having first and second electrodes disposed in a spaced apart manner, to be shorted upon placing an electrically conductive material external to the cordless soldering tool across the first and second electrodes to enable electrical current to flow through the detachable solder tip, the detachable solder tip comprised of graphite having an electrical resistivity of 1,500 micro-Ohm-cm or greater and a density of about 1.5 to 1.75 g/cc; and
an electrical switch located on the handheld body to selectively disconnect the detachable solder tip from the electrical power source, such that when the switch is closed, the power source powers the detachable solder tip when a short is created across the first and second electrodes to allow electrical current to flow between the first and second electrodes.

105. (New) The cordless soldering tool of claim 104, wherein the detachable solder tip has a thermal conductivity of less than or equal to 10 BTU/hr-ft-°F.